

What is claimed is:

1. Amplifier circuit, comprising:

5 a main stage amplifier connected between an RF input (HFin) and an RF output; and

10 at least one secondary stage amplifier, which is connected in parallel to the main stage amplifier between the RF input and the RF output, wherein the secondary stage amplifier comprises:

15 an input bipolar transistor, whose collector terminal or emitter terminal is high frequency-coupled to the RF input;

20 an output bipolar transistor, whose base terminal is high frequency-coupled to the base terminal of the input bipolar transistor, whose collector terminal or emitter terminal is high frequency coupled to the RF output, wherein the output bipolar transistor is further coupled to a supply voltage terminal.

25 2. Amplifier circuit according to claim 1, wherein the secondary stage amplifier further has means for applying a bias voltage to the base terminal of the input bipolar transistor and for applying a bias voltage to the base terminal of the output bipolar transistor, to thereby activate the secondary stage amplifier.

30 3. Amplifier circuit according to claim 2, wherein the collector of the input bipolar transistor is high frequency-coupled to the RF input, and wherein the collector of the output bipolar transistor is high frequency-coupled to the RF output, wherein the means for applying a bias voltage is designed to operate the collector base diode of the input bipolar transistor in saturation in flow direction, and to provide the base terminal of the output bipolar transistor

with an operating point potential when the secondary stage amplifier is switched-on.

4. Amplifier circuit according to claim 3, wherein the means for applying a bias voltage is designed such that when the secondary stage amplifier is switched-off, the collector base diode of the input bipolar transistor and the collector base diode of the output bipolar transistor are reverse-polarized.

10

5. Amplifier circuit according to claim 2, wherein the means for applying a bias voltage switches the secondary stage amplifier on and off, depending on a level of the RF input signal.

15

6. Amplifier circuit according to claim 1, wherein the main stage amplifier has an amplifier bipolar transistor, whose base terminal is connected to the RF input, wherein the input bipolar transistor of the secondary stage amplifier is connected, to draw the base potential of the amplifier bipolar transistor on such a potential, that the main stage amplifier is switched-off, when the secondary stage amplifier is switched-on.

25

7. Amplifier circuit according to claim 2, wherein the means for applying a bias voltage comprises a bias terminal and a resistor connected between the bias terminal and the base terminals of the input bipolar transistor and the output bipolar transistor.

30

8. Amplifier circuit according to claim 7, wherein a further resistor is connected between the base terminal of the input bipolar transistor and/or the output bipolar transistor and the resistor.

35

9. Amplifier circuit according to claim 2, wherein the means for applying a bias voltage comprises a first bias

terminal and a second bias terminal, a resistor connected between the first bias voltage terminal and the base terminal of the input bipolar transistor, and a resistor connected between the second bias terminal and the base terminal of the 5 output bipolar transistor, and wherein the base terminals of the input bipolar transistor and the output bipolar transistor are coupled via a capacity.

10. Amplifier circuit according to claim 1, wherein a diode is connected between the terminal of the output bipolar transistor, which is high frequency-coupled to the RF output, and the RF output, wherein the diode is operated in flow direction when the secondary stage amplifier is switched-on.

15 11. Amplifier circuit according to claim 10, wherein a high-impedance resistor is connected in parallel to the diode.